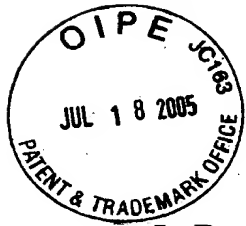


DOCKET NO.: HENK-0016 (H 3497 PCT/US)

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In Re Application of:**

Klein, et al

**Confirmation No.:** 3870

**Application No.:** 09/856,236

**Group Art Unit:** 1714

**Filing Date:** August 21, 2001

**Examiner:** Katarzyna I. Wyrozebski

**For:** Preparation Containing Gypsum From Flue Gas Desulphurisation, Method For Using The Same And Use Thereof

**EXPRESS MAIL LABEL NO:** EV 325726636 US

**DATE OF DEPOSIT:** July 18, 2005

EV325726636US

MS Appeal Brief - Patent  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPEAL BRIEF TRANSMITTAL  
PURSUANT TO 37 CFR § 1.192**

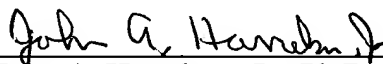
Transmitted herewith in triplicate is the APPEAL BRIEF in this application with respect to the Notice of Appeal received by The United States Patent and Trademark Office on **May 17, 2005**.

- ☐ Applicant(s) has previously claimed small entity status under 37 CFR § 1.27 .
- ☐ Applicant(s) by its/their undersigned attorney, claims small entity status under 37 CFR § 1.27 as:
- ☐ an Independent Inventor
  - ☐ a Small Business Concern
  - ☐ a Nonprofit Organization.
- ☐ Petition is hereby made under 37 CFR § 1.136(a) (fees: 37 CFR § 1.17(a)(1)-(4) to extend the time for response to the Office Action of                      to and through comprising an extension of the shortened statutory period of                      month(s).

	SMALL ENTITY		NOT SMALL ENTITY	
	RATE	FEE	RATE	FEE
<input checked="" type="checkbox"/> APPEAL BRIEF FEE	\$250	\$	\$500	\$500.00
<input type="checkbox"/> ONE MONTH EXTENSION OF TIME	\$60	\$	\$120	\$0.00
<input type="checkbox"/> TWO MONTH EXTENSION OF TIME	\$225	\$	\$450	\$0.00
<input type="checkbox"/> THREE MONTH EXTENSION OF TIME	\$510	\$	\$1020	\$0.00
<input type="checkbox"/> FOUR MONTH EXTENSION OF TIME	\$795	\$	\$1590	\$0.00
<input type="checkbox"/> FIVE MONTH EXTENSION OF TIME	\$1080	\$	\$2160	\$0.00
<input type="checkbox"/> LESS ANY EXTENSION FEE ALREADY PAID	minus	(\$ )	minus	(\$0.00)
<b>TOTAL FEE DUE</b>		\$0		\$500.00

- ☒ The Commissioner is hereby requested to grant an extension of time for the appropriate length of time, should one be necessary, in connection with this filing or any future filing submitted to the U.S. Patent and Trademark Office in the above-identified application during the pendency of this application. The Commissioner is further authorized to charge any fees related to any such extension of time to Deposit Account 23-3050. This sheet is provided in duplicate.
- ☒ A check in the amount of **\$500.00** is attached. Please charge any deficiency or credit any overpayment to Deposit Account No. 23-3050.
- ☐ Please charge Deposit Account No. 23-3050 in the amount of \$       .00      . This sheet is attached in duplicate.
- ☒ The Commissioner is hereby authorized to charge any deficiency or credit any overpayment of the fees associated with this communication to Deposit Account No. 23-3050.

Date: July 18, 2005

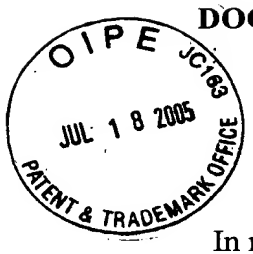
  
 John A. Harrelson, Jr., Ph.D.  
 Registration No. 42,637

Woodcock Washburn LLP  
 One Liberty Place - 46th Floor  
 Philadelphia PA 19103  
 Telephone: (215) 568-3100  
 Facsimile: (215) 568-3439

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Mail Stop Appeal-Brief Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**APPELLANT'S BRIEF PURSUANT TO 37 C.F.R. § 41.37**

This brief is being filed in support of Appellant's appeal from the rejections of claims 12-32 and 42-49 dated April 6, 2005. A Notice of Appeal was filed on May 17, 2005.

**1. REAL PARTY IN INTEREST**

Henkel Kommanditgesellschaft Auf Aktien (Henkel KGaA) by virtue of the assignment from the inventors filed August 21, 2001.

**2. RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences known to Appellants, Appellants' legal representative, or the assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending Appeal.

**3. STATUS OF CLAIMS**

Claims 12-49 are pending. Claims 31-41 are withdrawn from consideration. Claims 12-32 and 42-49 are rejected as allegedly obvious under 35 U.S.C. § 103(a) over U.S. Patent No. 6,229,970 ("the Richards patent") and over the Richards patent in view of U.S. Patent No. 5,169,617 ("the Clemmens patent"). The rejection of claims 12-30 and 42-49 is appealed.

**4. STATUS OF AMENDMENTS**

As noted in the Final Rejection, mailed April 6, 2005, the amendments filed January 31, 2005 in response to the final rejection have been entered. A complete listing of currently pending claims is provided in the Claims Appendix.

**5. SUMMARY OF CLAIMED SUBJECT MATTER**

The present invention generally relates to compositions that comprise at least one water-soluble or water-dispersible polymer and at least one filler comprising WDP gypsum particles obtained from waste-gas desulphurization and having a mean particle diameter ranging from about 13  $\mu\text{m}$  to 500  $\mu\text{m}$ . See, for example, page 3, lines 25-30. The present invention also relates to processes for making such compositions. See, for example, page 4, lines 1-6. The compositions of the instant invention are useful as adhesives. Such adhesives, unlike prior commercial adhesives, show good elasticity and are able to bond under stress. See page 3, lines 21-24. In addition, the instant compositions show an unexpected advantage of decreased shrinkage that is not taught by the prior art. See Example 2 on pages 15-16.

**6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

A. Whether the Examiner has demonstrated that Claims 12-30 and 42-49 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,229,970 ("the Richards patent").

B. Whether the Examiner has demonstrated that Claims 12-30 and 42-49 are unpatentable under 35 U.S.C. § 103(a) over the Richards patent in view of U.S. Patent No. 5,169,617 ("the Clemmens patent").

**7. GROUPING OF THE CLAIMS**

Claims 12-30 stand or fall together. Claims 42-49 stand or fall together but separately from claims 12-20 based on a separate argument presented below.

## **8. ARGUMENT**

### **A. The Examiner has not demonstrated that Claims 12-30 and 42-49 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,229,970 (“the Richards patent”).**

Claims 12-30 and 42-49 stand rejected under 35 U.S.C. § 103 (a) as allegedly obvious over U.S. Patent No. 6,229,970 (“the Richards patent”). Nothing in the Richards patent, however, teaches or suggests the use of gypsum of the particle size of the instant invention. While acknowledging that the Richards patent does not disclose the particle size of the gypsum required by the instant claims, the Examiner, nonetheless, asserts that one type of gypsum of the Richards patent is the same size as the gypsum of the instant claims. This assertion is based the disclosure in the Richards patent that gypsum from a desulfurization process can be used in the product of the Richard’s patent (Paragraph 2 of the April 6, 2005 Final Rejection). The Examiner’s argument incorrectly assumes that all gypsum made by a desulfurization process will have the same properties. However, as Applicants note at page 8, line 27 to page 9, line 3 of the application, gypsum particles of differing dimensions are formed by different waste-gas desulfurization processes. As such, one skilled in the art could arrive at the instant invention only by using the Applicant’s blueprint for guidance. As is well known, it is impermissible to use the claimed invention as an instruction manual or “template” to piece together the teachings of the prior art so that the claimed invention is rendered obvious. *In re Fritch*, 972 F.2d 1260, 23 USPQ.2d 1780 (Fed. Cir. 1992). For at least this reason, the rejection is improper.

To further support the fact of unobviousness, Applicants note that the instant compositions show an unexpected advantage of decreased shrinkage that is not taught or suggested by the art. See Example 2 on pages 15-16. No such guidance is found in the Richards patent. While it is clear that the inventors of the Richards patent appreciated the shrinkage problem associated with gypsum products (Col. 2, ll 26-34), the reference clearly does not appreciate that selecting gypsum of a particular particle size can reduce this problem. Nowhere in the Richards patent is particle size even mentioned.

In regard to claims 42-49, independent claim 42 utilizes the “consisting essentially of” transition phrase. As such, Applicants submit that these claims are not obvious in view of the

aforementioned cited art for at least the reasons discussed above and because the product of these claims can not contain an appreciable amount of pulped paper (or cellulosic) fiber as required by the Richards patent (see, for example, the Abstract, and column 6, lines 13-15, and claim 1 which teaches that the invention of the Richards patent utilizes at least about 7 weight percent pulped paper fibers). Nothing in the cited art teaches or suggests the omission of these fibers.

The instant claims are not obvious in view of the Richards patent.

**B. The Examiner has not demonstrated that Claims 12-30 and 42-49 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,229,970 ("the Richards patent") in view of U.S. Patent No. 5,169,617 ("the Clemmens patent").**

Claims 12-30 and 42-49 stand rejected under 35 U.S.C. § 103 (a) as allegedly obvious over the Richards patent in view of U.S. Patent No. 5,169,617 ("the Clemmens patent"). To establish a proper *prima facie* rejection based on a combination of references, the following elements must be shown:

- (1) the references are available as prior art against the claimed invention;
- (2) the motivation (explicit or implicit) provided by the references that would have rendered the claimed invention obvious to one of ordinary skill in the art at the time of the invention;
- (3) a reasonable expectation of success;
- (4) the basis for concluding that the claimed invention would have been obvious to do, not merely obvious to try; and
- (5) the references teach the claimed invention as a whole.

*In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1983). Applicants submit that at least elements 2 and 4 have not been established. There is not even a *prima facie* case for obviousness.

As discussed above, the Richards patent does not teach or suggest the use of gypsum where the particle sizes required by the present claims. Desulfurization product gypsum is only one possible source of gypsum taught in the Richards patent. The patent, however, does not disclose a particle size. In an attempt to show that flu gas desulfurization gypsum particles are necessarily of the particle size of the instant invention, the Examiner has presented the Clemmens patent. However, the combination fails for two reasons. First, there

is no motivation to combine the references. Second, the Clemmens patent does not teach that flu gas desulfurization gypsum is necessarily of the instantly claimed particle size.

In order to support a combination of the Richards patent and the Clemmens patent, the Office must provide some evidence of why the references suggest such a combination. No evidence is presented. Nothing in the cited art suggests why one would pick the gypsum particles of the Clemmens patent for use in the present invention over those of other flu-gas desulfurization processes, scrap gypsum, native gypsum or other sources of gypsum. The Richards patent does not suggest the gypsum particle of the size presented in the instant claims. The Clemmens patent does not suggest the gypsum particle size of the instant claims would be advantageous in the instant compositions. As such, the combination of references is not supported by motivation and a *prima facie* case has not been established. The combination references also appears to be based on an improper "obvious to try" not an "obvious to do" standard. As discussed above, nothing in the cited art suggests the reduced shrinkage advantage of the instantly claimed compositions. Without a proper motivation to combine, the rejection is improper.

The Examiner incorrectly asserts that the burden has shifted to the Applicants to provide evidence that the flu-gas process of the cited art would not produce particles of the claimed size. Applicants note that the MPEP §2142 states:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. *If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness.* ... The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must *expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning* as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references."

(emphasis added). As discussed above, the Office has not established a *prima facie* case of obviousness. Therefore, Applicants do not have the alleged burden.

Furthermore, the Clemmens patent does not teach that gypsum particles made by a desulfurization process will necessarily be of the particle size utilized in the instantly claimed invention. As discussed above, particle size depends on the process conditions of the desulfurization process. Even though the Clemmens patent is directed to particle sizes of less than 200 microns, it does not follow that all desulfurization process will produce the same

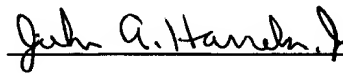
size particles. Thus, even if one did combine the teachings of the Richards and Clemmens patents, one would not arrive at any instantly claimed invention.

In regard to claims 42-49, independent claim 42 utilizes the “consisting essentially of” transition phrase. As such, Applicants submit that these claims are not obvious in view of the aforementioned cited art for at least the reasons discussed above and because the product of these claims can not contain an appreciable amount of pulped paper (or cellulosic) fiber as required by the Richards patent (see, for example, the Abstract, and column 6, lines 13-15, and claim 1 which teaches that the invention of the Richards patent utilizes at least about 7 weight percent pulped paper fibers). Nothing in the cited art teaches or suggests the omission of these fibers.

## **9. CONCLUSION**

Based on the detailed arguments and analysis presented above, Applicants respectfully submit that compositions of the instant claims are not obvious in view of the cited art and seek relief from the Examiner’s incorrect conclusions regarding the teachings of this art. More specifically, Applicants submit that the claims fully comply with the requirements of 35 U.S.C. § 103(a). Therefore, Applicants request that this patent application be remanded to the Examiner with an instruction to both withdraw the rejection for alleged unpatentability and allow the appeal claims.

Respectfully submitted,



Date: July 18, 2005

John A. Harrelson, Jr., Ph.D.  
Registration No. 42,637

Woodcock Washburn LLP  
One Liberty Place - 46th Floor  
Philadelphia PA 19103  
Telephone: (215) 568-3100  
Facsimile: (215) 568-3439



CLAIMS APPENDIX

1-11 (canceled)

12. (previously presented) A composition comprising:

- (a) at least one water-soluble or water-dispersible polymer; and
- (b) at least one filler comprising WDP gypsum particles obtained from waste-gas desulphurization and having a mean particle diameter ranging from about 13  $\mu\text{m}$  to 500  $\mu\text{m}$  as determined by the Fraunhofer diffraction technique.

13. (previously presented) The composition of claim 12, wherein the mean diameter of the WDP gypsum particles ranges from about 30  $\mu\text{m}$  to 250  $\mu\text{m}$ .

14. (previously presented) The composition of claim 13, wherein the filler further comprises at least one other type of inorganic filler particles in addition to the WDP gypsum particles.

15. (previously presented) The composition of claim 14, wherein the other type of filler comprises chalk, titanium dioxide, barium sulfate, silica flour, silica gel, dolomite, or kaolin or mixtures thereof.

16. (previously presented) The composition of claim 15, wherein the water-soluble or water dispersible polymer is polyurethane, polyacrylate, polymethacrylate, polyvinyl ester, polystyrene, polybutadiene, polyamide, polyester, polyvinyl chloride, ethylene/vinyl acetate copolymer, styrene/butadiene copolymer, styrene/acrylonitrile polymer, styrene/acrylate copolymer or a mixture thereof.

17. (previously presented) The composition of claim 16, wherein the filler is present in the composition in a total amount of at least 40 weight percent, based on the total weight of the composition.

18. (previously presented) The composition of claim 17, wherein the composition comprises from 50 weight percent to 99 weight percent of filler, from 1 weight percent to 50 weight percent of water-soluble or water dispersible polymer, and up to 49 percent by weight of water.

19. (previously presented) The composition of claim 12, wherein the filler includes at least one of chalk, titanium dioxide, barium sulfate, silica flour, silica gel, dolomite, kaolin or mixtures thereof.

20. (previously presented) The composition of claim 12, wherein the water-soluble or water dispersible polymer is polyurethane, polyacrylate, polymethacrylate, polyvinyl ester, polystyrene, polybutadiene, polyamide, polyester, polyvinyl chloride, ethylene/vinyl acetate copolymer, styrene/butadiene copolymer, styrene/acrylonitrile polymer, styrene/acrylate copolymer or mixtures thereof.

21. (previously presented) The composition of claim 12 wherein the composition is a surface coating, a surfacing composition, a sealing composition, an adhesive, or a molding composition.

22. (previously presented) A process for preparing a polymer-containing composition comprising combining in any order one or more water-soluble or water-dispersible polymers with filler particles, wherein the filler particles comprise WDP gypsum particles that are obtained from waste-gas desulphurization and have a mean particle diameter ranging from 13  $\mu\text{m}$  to 500  $\mu\text{m}$  as measured by the Fraunhofer diffraction technique.

23. (previously presented) The process of claim 22 wherein the filler particles comprise a mixture of the WDP gypsum particles and at least one other type of inorganic filler particles.

24. (previously presented) The process of claim 22 wherein the water-soluble polymers or water-dispersible polymers are in an aqueous dispersion prior to the combination with the filler particles.

25. (previously presented) The process of claim 22 wherein the polymer-containing composition is in the form of a solid powder, a paste, an aqueous dispersion, or a non-aqueous liquid.

26. (previously presented) The process of claim 22 wherein water or one or more other additives, or combinations thereof are combined in any order with the polymers and filler particles to form the polymer-containing composition.

27. (previously presented) The process of claim 22 wherein the polymer-containing composition is a polymer dispersion and wherein the filler particles comprise at least one other type of inorganic filler particles and the WDP gypsum particles have a mean particle diameter ranging from about 30  $\mu\text{m}$  to 250  $\mu\text{m}$ .

28. (previously presented) A process for preparing a surface coating, a surfacing compound, a sealing compound, an adhesive, or a molding composition comprising combining one or more water-soluble or water-dispersible polymers with WDP gypsum particles wherein the WDP gypsum particles are obtained from waste-gas desulphurization and have a mean particle diameter ranging from about 13  $\mu\text{m}$  to 500  $\mu\text{m}$  as measured by the Fraunhofer diffraction technique.

29. (previously presented) The process of claim 28 wherein the mean particle diameter of the WDP gypsum particles ranges from about 30  $\mu\text{m}$  to 250  $\mu\text{m}$ .

30. (previously presented) A surface coating, a surfacing compound, a sealing compound, an adhesive, or a molding composition prepared by the process of claim 28.

31. (withdrawn) The composition of claim 12 wherein the WDP gypsum particles have a mean particle diameter ranging from about 40 to 120  $\mu\text{m}$ .

32. (withdrawn) The composition of claim 12 wherein the WDP gypsum particles have a mean particle diameter ranging from about 80 to 100  $\mu\text{m}$ .

33. (withdrawn) An article comprising:

(a) a substrate; and

(b) a coating comprising:

(i) at least one water-soluble or water-dispersible polymer; and

(ii) at least one filler comprising WDP gypsum particles obtained from waste-gas desulphurization and having a mean particle diameter ranging from about 13  $\mu\text{m}$  to 500  $\mu\text{m}$  as determined by the Fraunhofer diffraction technique;

the coating being applied to at least one side of the substrate.

34. (withdrawn) The article of claim 33 wherein the water-soluble or water dispersible polymer is polyurethane, polyacrylate, polymethacrylate, polyvinyl ester, polystyrene, polybutadiene, polyamide, polyester, polyvinyl chloride, ethylene/vinyl acetate copolymer, styrene/butadiene copolymer, styrene/acrylonitrile polymer, styrene/acrylate copolymer or mixtures thereof.

35. (withdrawn) The article of claim 34 wherein the mean diameter of the WDP gypsum particles ranges from about 30  $\mu\text{m}$  to 250  $\mu\text{m}$ .

36. (withdrawn) The article of claim 33 further comprises at least one other type of inorganic filler particles in addition to the WDP gypsum particles.

37. (withdrawn) The article of claim 36, wherein the other type of filler comprises chalk, titanium dioxide, barium sulfate, silica flour, silica gel, dolomite, or kaolin or mixtures thereof.

38. (withdrawn) The article of claim 37, wherein the filler is present in the composition in a total amount of at least 40 weight percent, based on the total weight of the composition.

39. (withdrawn) The article of claim 38, wherein the composition comprises from 50 weight percent to 99 weight percent of filler, from 1 weight percent to 50 weight percent of water-soluble or water dispersible polymer, and up to 49 percent by weight of water.

40. (withdrawn) The article of claim 33, wherein the filler includes at least one of chalk, titanium dioxide, barium sulfate, silica flour, silica gel, dolomite, kaolin or mixtures thereof.

41. (withdrawn) The article of claim 33, wherein the water-soluble or water dispersible polymer is polyurethane, polyacrylate, polymethacrylate, polyvinyl ester, polystyrene, polybutadiene, polyamide, polyester, polyvinyl chloride, ethylene/vinyl acetate copolymer, styrene/butadiene copolymer, styrene/acrylonitrile polymer, styrene/acrylate copolymer or mixtures thereof.

42. (previously presented) A composition consisting essentially of:

(a) at least one water-soluble or water-dispersible polymer that is polyurethane, polyacrylate, polymethacrylate, polyvinyl ester, polystyrene, polybutadiene, polyamide, polyester, polyvinyl chloride, ethylene/vinyl acetate copolymer, styrene/butadiene copolymer, styrene/acrylonitrile polymer, or styrene/acrylate copolymer;

(b) WDP gypsum particles obtained from waste-gas desulphurization and having a mean particle diameter ranging from about 13  $\mu\text{m}$  to 500  $\mu\text{m}$  as determined by the Fraunhofer diffraction technique; and

(c) optionally one or more of water, inorganic fillers, emulsifiers, dispersants, stabilizers, defoamers, antioxidants, photostabilizers, and pigment dispersants.

43. (previously presented) The composition of claim 42, wherein the mean diameter of the WDP gypsum particles ranges from about 30  $\mu\text{m}$  to 250  $\mu\text{m}$ .

44. (previously presented) The composition of claim 43 having at least one inorganic filler.

45. (previously presented) The composition of claim 44, wherein the inorganic filler comprises at least one of chalk, titanium dioxide, barium sulfate, silica flour, silica gel, dolomite, and kaolin.

46. (previously presented) The composition of claim 44, wherein the combined amount of gypsum and inorganic filler is present in the composition in a total amount of at least 40 weight percent, based on the total weight of the composition.

47. (previously presented) The composition of claim 46, wherein the composition comprises from 50 weight percent to 99 weight percent of gypsum and inorganic filler, from 1 weight percent to 50 weight percent of water-soluble or water dispersible polymer, and up to 49 percent by weight of water.

48. (previously presented) The composition of claim 44, wherein the inorganic filler includes at least one of chalk, titanium dioxide, barium sulfate, silica flour, silica gel, dolomite, kaolin or mixtures thereof.

49. (previously presented) The composition of claim 42 wherein the composition is a surface coating, a surfacing composition, a sealing composition, an adhesive, or a molding composition.